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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/085,034

03/01/2002

Keizo Sugiyama

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23850 7590 01/17/2007  
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EXAMINER

ROSE, KERRI M

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/085,034

Applicant(s)

SUGIYAMA ET AL.

Examiner

Kerri M. Rose

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8,10-14 and 17 is/are rejected.
- 7) ☒ Claim(s) 6,7,9,15,16 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see page 10, filed 12/8/2006, with respect to the rejection(s) of claim(s) 1, 2, 5, 8, 10, 11, 14, and 17 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new reference Cervello et al. (US 2002/0060995).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3- 5, 8, 10-14, and 17 are rejected under 35 U.S.C. 103(a) as being anticipated by Kostic et al. (US 6,826,409) in view of Cervello et al. (US 2002/0060995).
4. In regards to claim 1, Kostic discloses a wireless LAN system comprising: a plurality of wireless stations (fig. 1 element 104); and a switching apparatus (fig. 1.102) for switching a frequency channel used between stations for communication, the switching apparatus having a means for selecting a frequency channel (col. 5 lines 35-37), and a means for sending a switching request packet that identifies the selected frequency channel to the stations (col. 5 lines 37-39) upon expiration of a polling period (col. 9 lines 5-8 discloses the frequency reassignment is carried out in response to a request, i.e. poll), each station having a means for switching a

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frequency channel from the channel being used to the channel identified by the switching request packet (col. 4 lines 10-12).

5. Kostic does not disclose wherein the means for selecting a frequency channel selects a frequency channel based on line status information regarding total number of packets and number of error packets.

6. Cervello discloses using the packet error rate as a basis for changing the frequency channel in paragraphs 36 and 47.

7. It would have been obvious to one of ordinary skill in the art to modify Kostic's wireless LAN system to include Cervello's channel selection method because changing channels in response to the current channel condition helps to maintain quality of service as taught by Cervello in paragraphs 5-7.

8. Claim 10 is rejected upon the same grounds as claim 1.

9. In regards to claim 3, Kostic discloses a wireless LAN system comprising: a plurality of wireless stations (fig. 1 element 104); and a switching apparatus (fig. 1.102) for switching a frequency channel used between stations communicated with each other, said switching apparatus including means for selecting a frequency channel to be used (col. 5 lines 35-37), and means for sending a switching request packet for specifying said selected frequency channel to said stations (col. 5 lines 37-39), each of said stations including means for switching a current frequency channel to the frequency channel specified by the switching request packet (col. 4 lines 10-12) wherein the switching apparatus further comprises a manager for collecting a line status information indicating the varying status of lines between the stations (col. 9 lines 10-12), and a means for judging whether a frequency channel should be switched based on the line status

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information (col. 9 lines 13-38); each station has an agent for sending the line status information to the manager in the switching apparatus (col. 9 lines 10-12 discloses each station sends information to a manager in the switching apparatus. Therefore, each station must have an agent to send the information.); and the selecting means in the switching apparatus selects the frequency channel based on a judgment of the judging means (col. 9 lines 40-50).

Kostic does not disclose wherein the means for selecting a frequency channel selects a frequency channel based on line status information regarding total number of packets and number of error packets.

Cervello discloses using the packet error rate as a basis for changing the frequency channel in paragraphs 36 and 47.

It would have been obvious to one of ordinary skill in the art to modify Kostic's wireless LAN system to include Cervello's channel selection method because changing channels in response to the current channel condition helps to maintain quality of service as taught by Cervello in paragraphs 5-7.

10. In regards to claim 4, Kostic and Cervello disclose a system as claimed in claim 3, wherein the manager in the switching apparatus communicates with the agent in the station based on Simple Network Management Protocol. SNMP is well known in the art and it would have been obvious to use SNMP to communicate because SNMP simplifies management functions.

11. In regards to claim 5, Kostic discloses a system as claimed in claim 1, wherein said selecting means in said switching apparatus selects a frequency channel so that a polarized wave of said frequency channel to be selected does not overlap polarized waves of neighbor frequency channels (col. 11 lines 24-30).

12. In regards to claim 8, Kostic discloses a system as claimed in claim 1, wherein said stations consist of one parent-station (fig. 4.404) and a plurality of child-stations (4.402); the agent in the parent-station and each child-station calculates a percentage value of the number of success packets in relation to the total number of packets for each wireless link between the parent-station and each child-station (col. 7 lines 42-54), and sends a percentage value for each wireless link to the switching apparatus (col. 8 lines 53-60); the manager in the switching apparatus receives the percentage value; and the switching judgment means judges based on the number of wireless links for which the percentage value is smaller than a threshold whether a frequency channel should be switched (col. 10 lines 10-13).

13. In regards to claim 11, Kostic discloses a wireless LAN system comprising: a plurality of wireless stations (fig. 1 element 104); and a switching apparatus (fig. 1.102) for switching a frequency channel used between stations communicated with each other, said switching apparatus including means for selecting a frequency channel to be used (col. 5 lines 35-37), and means for sending a switching request packet for specifying said selected frequency channel to said stations (col. 5 lines 37-39), each of said stations including means for switching a current frequency channel to the frequency channel specified by the switching request packet (col. 4 lines 10-12) wherein the switching apparatus further comprises a manager for collecting a line status information indicating the varying status of lines between the stations (col. 9 lines 10-12), and a means for judging whether a frequency channel should be switched based on the line status information (col. 9 lines 13-38); each station has an agent for sending the line status information to the manager in the switching apparatus (col. 9 lines 10-12 discloses each station sends information to a manager in the switching apparatus. Therefore, each station must have an agent

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to send the information.); and the selecting means in the switching apparatus selects the frequency channel based on a judgment of the judging means (col. 9 lines 40-50).

Kostic does not disclose wherein the means for selecting a frequency channel selects a frequency channel based on line status information regarding total number of packets and number of error packets.

Cervello discloses using the packet error rate as a basis for changing the frequency channel in paragraphs 36 and 47.

14. It would have been obvious to one of ordinary skill in the art to modify Kostic's wireless LAN system to include Cervello's channel selection method because changing channels in response to the current channel condition helps to maintain quality of service as taught by Cervello in paragraphs 5-7.

15. In regards to claim 12, Kostic and Cervello disclose a method as claimed in claim 11, wherein said line status information includes information of the total number of packets and the number of error packets (Cervello paragraph 36).

16. Claims 13, 14, and 17 are rejected upon the same grounds as claims 4, 5, and 8 respectively.

***Allowable Subject Matter***

17. The indicated allowability of claims 3, 4, 12, and 13 is withdrawn in view of the newly discovered reference(s) to Cervello et al. Rejections based on the newly cited reference(s) are above.

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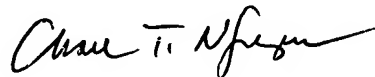
18. Claims 6, 7, 9, 15, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Rose whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Thursday, 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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